



The manufacturer
may use the mark



Revision 1.0 April 28, 2023
Surveillance Audit Due
May 1, 2026



Certificate / Certificat Zertifikat / 合格証

VEL 2209124 C001

exida hereby confirms that the:

Gate Valve and Actuator Assembly SDV-5660-07, SDV-5660-17 Velan Montreal, QC - Canada

Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-2

and meets requirements providing a level of integrity to:

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type A, Route 2_H Device

**PFH/PFD_{avg} and Architecture Constraints
must be verified for each application**

Safety Function:

The Final Element assembly will move the Gate Valve to the designed safe position per the actuator design within the specified safety time.

Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.



Evaluating Assessor

Certifying Assessor

Certificate / Certificat / Zertifikat / 合格証

VEL 2209124 C001

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type A, Route 2_H Device

**PFH/PFD_{avg} and Architecture Constraints
must be verified for each application**

Gate Valve and Actuator Assembly

Systematic Capability:

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each element. This device meets *exida* criteria for Route 2_H.

Device	λ_s	λ_D	#	E
(108) Pneumatic Filter with Manual Drain Valve	0	15	155	85
(110) Filter Regulator	0	115	655	85
(286) Dust Excluder	0	15	155	85
(35) Relief Valve	0	100	750	160
(170) 3/2 N.C. Direct Acting Solenoid Valve	625	90	605	105
(124) Check Valve	75	20	310	20
Single Acting Pneumatic Actuator – Spring Return	95	350	0	1000
Pneumatic Booster + Bypass, No Diagnostics	182	117	975	321
Gate Valve, Close on Trip	0	445	532	

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/PFD_{avg} considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report: VEL 22/09-124 R002 V1 R1 (or later)

Safety Manual: SIL-MTV-09-22, PLAS-IOM_EN



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